

FIG. 1A

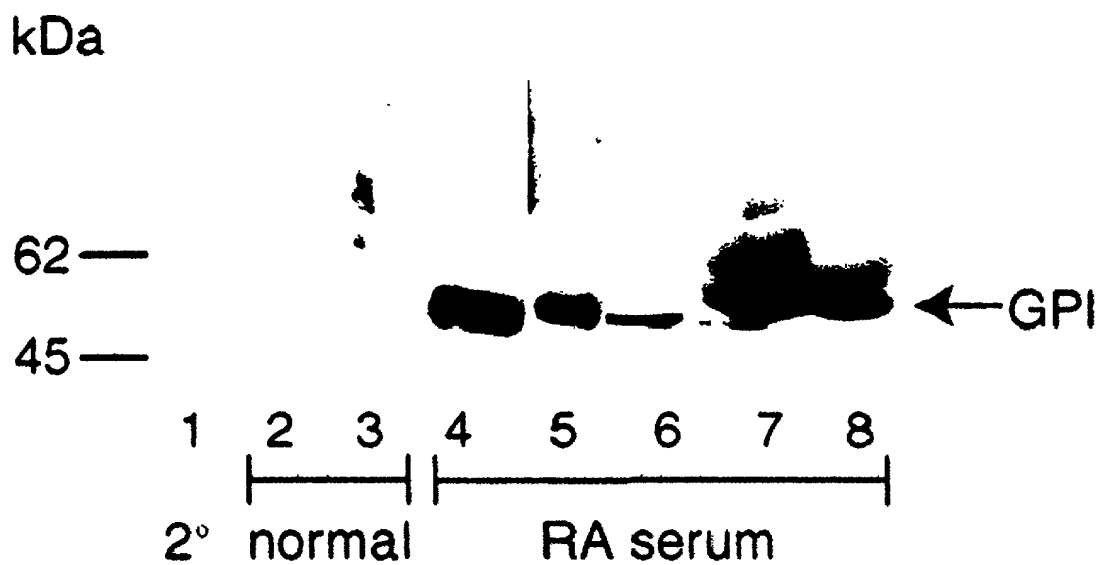


FIG. 1B

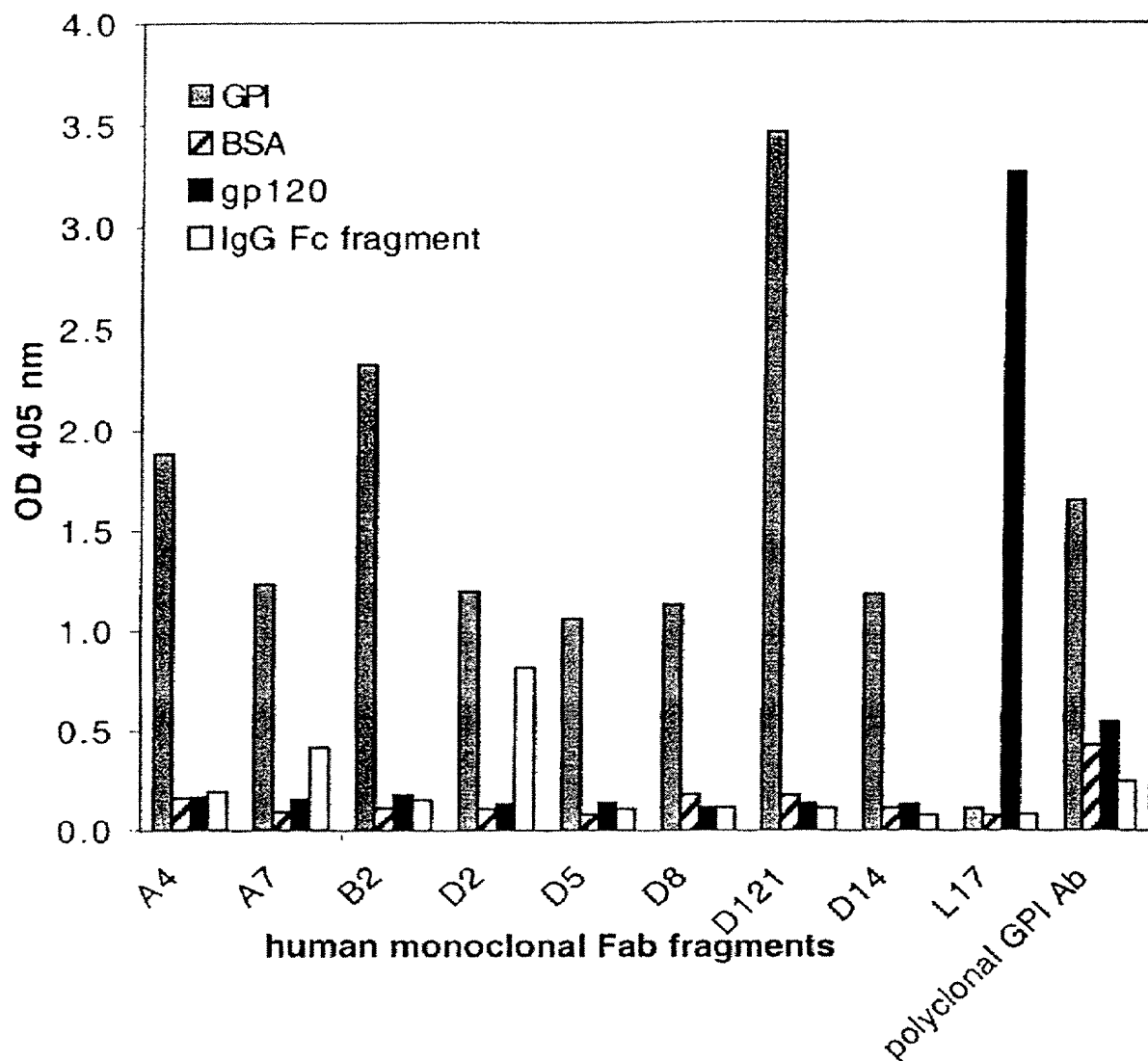


FIG. 2

Light Chain Variable AA Sequences

<u>Name</u>	<u>SEQ ID</u> <u>NO.</u>	FR1	CDR1	FR2
A4	1	PDSLAVSLGERATINC	KSSQSVFYTSNNKNYLA	WYQQKPGQPPKLLIY
D2	2	PSFLSASVGDVVTTC	RASQGISSYLA	WYQLKPGKAPKLLIY
D121	3	PGTSLSPGERATLSC	RASQSVSSSYLA	WYQQKPGQAPRLLIY
B2	4	PDSLAVSLGERATINC	KSSQSVFYTSNNKNYLA	WYQQKPGQPPKLLIY
D14	5	PGTSLSPGEGATLSC	RASQSVSSSYLA	WYQQRPGQAPRLLIY
D5	6	PGTSLSPGEGATLSC	RASQSVSSSYLA	WYQQKPGQAPRLLIY
A7	7	PGTSLSPGERVTLSC	RASQSVSSSYLA	WYQQKPGQAPRLLIY
<u>Name</u> <u>cont'd</u>	CDR2	FR3	CDR3	FR4
A4	WASTRES	GVPDRFSGSGGTDFILTISSLQAEDVAVYYC	QQYYDSYT	FGQGTKLEIKRTVA
D2	AATLQS	GVPSRFSGSGGTDFLTISLQPEDFAVYYC	QQLNQVPLT	FGGGAKEVIRRTVA
D121	GASSRAT	GIPDRFSGSGGTDFLTISRLEPEDFAVYYC	QQYGSSTPT	FGQGTKVEIKRTVA
B2	WASTRES	GVPDRFSGSGGTDFILTISSLQAEDVAVYYC	QQYYDSYT	FGQGTKLEIKRTVA
D14	GASSRAT	GIPDRFSGSGGTDFSTISLQPEDTGTYYC	QQYDNPVDT	FGQGTREIKRTVA
D5	GASSRAT	GIPDRFSGSGGTDFLTISRLEPEDFAVYYC	QQYGTSL	FGQGTREIKRTVA
A7	GASSRAT	GIPDRFSGSGGTDFLTISRLEPEDFAVYYC	QQYGSSTPT	FGQGTKVEIKRTVA

FIG. 3AL

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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Heavy Chain Variable AA Sequences

Name	SEQ ID NO.	FR1	CDR1	FR2	CDR2	VH gene
A4	8	GGGVVQPGRLKLSAASGFTFS	SHGSH	WVRQAPGKGLEWVA	LLSSDGSNKFYIESVKG	
D2	9	.....AW..LR..V.....	..TM.	.....	..TM.	
D121	10	.....R.....	.YTF.	.....	VI.Y..NK.Y.AD....	
B2	11	GAEVRKPGTSVRISCRASGNTFT	GHHIH	WVRQAPGQGLQWMG	RINPTGGVSLAQSFQD	
D14	12	GGGLVQPGGSLRLSCATSGFIEN	SYAMN	WVRQAPGKGLEWVS	RISGNSGSTFYADSVKG	
D5	13	GPGLVRPSTLTLTCPVSPGSIK	GDSYFWS	WVRQPVGKGLEWIG	RIYGRGTTNRYNRFVS	
A7	14	GAEVKKPGSSVKVSCRASGGTFS	RYAIS	WVRQAPGQGLEWMG	GIIPFPGPVNYAQKFPQ	
Name	cont'd	FR3	CDR3	FR4		
A4		RFTISKDNSKNTLYLQMNLSLRIDDTAVYYCAI	SLVGTTFATNY	WGQGTLLVTVSS	VH3	
D2		.....R.....LS...PE.....TN	.E..A...D.	.....	VH3	
D121		.....VE.....	.I.....	.....	VH3	
B2		RVSLTRDRSSNTVFLELSGLTEEDTALYFCAR	PRFNMIREPLDL	WGQGTVVTVSS	VH1	
D14		RFTISRDNKNTAFELRMNSQRAEDTAVYYCAK	DLSSGAYYYYGMDV	WGQGTVVTVSS	VH3	
D5		RVMSVDMRSQFFLELRDVTADTAVYYCAR	DKGSEYSYFDP	WGQGTVVTVSS	VH4	
A7		RVTITADDSTNTAYMGLSLRSRGDTAVYYCAR	VAYDGSYYNNIPKIYYYSYMD	WGKGTVVTVSS	VH1?	

FIG. 3AH

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SERIAL NO.: 09/828,708

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Name	SEQ ID NO:	FR1	CDR1	FR2	CDR2
A4	8	GGGVVQPGRLSLKLSAASGFTFS	SHGSH	WVRQAPGKGLEWVA	LLSSDGSNKFYIESVKG
D2	9	.....AW..LR...V.....	..TM.		..TM.
D121	10	.....R.....	.YTF.		VI.Y..NK.Y.AD....
DP-46		.....R.....	.YAM.		VI.Y.....AD....
B2	11	GAEVKPKGTSVRISCRASGNTFT	GHHIH	WVRQAPGQGLQWMG	RINPTGGGVSLAQSFQD
DP-7		....K...A..KV..K...Y...	SYMH	.....E...	I...S..ST.Y..K..G
D14	12	GGGLVQPGGSLRLSCATSGFIFN	SYAMN	WVRQAPGKGLEWVS	RISGNSGSTFYADSVKG
VH26		.....A...T.S	....S		A...SG...Y.....
D5	13	GPGLVVRPSQTLTLCPVSPGSIK	GDSYFWS	WVRQPVGKGLEWIG	RIYGRGTTNYNRVFGS
IGHCAK		.....K.....T..G...S	SG..Y..	.I...A.....	...TS.S....PSLK.
A7	14	GAEVKKPGSSVKVSCRASGGTFS	RYAIS	WVRQAPGQGLEWMG	GIIPPFPGPVNYAQKFQG
VH1-69		.....K.....	S....	.....	....I..TA.....

FIG. 3B

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
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SERIAL NO.: 09/828,708

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Name cont'd	FR3	CDR3	FR4	VH gene
A4	RFTISKDNSKNTLYLQMNSLRIDDTAIVYCAI	SLVGTTAFNY	WGQGTLLVTVSS	VH3
D2	...R...LS...PE...TN	.E..A...D.	.....	VH3
D121	.....VE.....	.I.....		VH3
DP-46	...R.....AE.....R			
B2	RVSILTRDRSSNTVFLELSGLTEEDTALYFCAR	PRFNMIREPLDL	WGQGTLLVTVSS	VH1
DP-7	..TM...T.TS..YM...S.RS...V.Y...			
D14	RFTISRDNKNTAFLRMNSQRAEDTAIVYCAK	DLSSGAYYYGGM	WGQGTLLVTVSS	VH3
VH26	.....LY.Q...L.....	DV		
D5	RVSMSVDMRSQOFFLELRDVTAAETAIVYCAR	DKGSEYSYFDP	WGQGIIVNVVFS	VH4
IGHCAK	..TI...T.KN..S.K.SS.....			
A7	RVTITADDSTNTAYMGLSSLRSRGDTAIVYCAR	VAYDGSYYNNI	WGKGTLLVTVSS	VH1
VH1-69	.....K..S...E.....E.....	PKIYYYSYMDV		

FIG. 3B Cont'd

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
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SERIAL NO.: 09/828,708

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Clone	Closest Germline	% amino acid homology	% nucleotide homology	R/S ratio FRs	R/S ratio CDRs
A4	DP-46	86	89	6/6:1.0	12/5:2.4
D2	DP-46	87	92	8/6:1.3	4/5:0.8
D121	DP-46	91	95	2/4:0.5	7/0:>7.0
B2	DP-7	67	79	20/17:1.2	<u>14/5:2.8</u>
D14	VH26	87	93	7/3:2.3	5/2:2.5
D5	IGHCAK	73	81	17/16:1.1	13/4:3.3
A7	VH1-69	90	94	7/2:3.5	5/0:>5.0

FIG. 3C

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
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INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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CDR's Heavy Chain

SEQ ID NO:	CDR1	SEQ ID NO:	CDR2	SEQ ID NO:	CDR3
15	SHGSH	22	LLSSDGSNKFYIESVKG	29	SLVGTTFNFY
16	.TM.	23	.IFY.....Y.AD....	30	.E..A...D.
17	.YTF.	24	VI.Y..NK.Y.AD....	31	.I.....
18	GHHIH	25	RINPTGGGVSIAQSFQD	32	PRFNMIREPLDL
19	SYAMN	26	RISGNSGSTFYADSVKG	33	DLSSGAYYYYGMDV
20	GDSYFWS	27	RIYGRGTTNYNRVFGS	34	DKGSEYSYFDP
21	RYAIS	28	GIIPFPGPVNYAQKFQG	35	VAYDGSYNNIPKIYYSYMDV

CDR's Light Chain

SEQ ID NO:	CDR1	SEQ ID NO:	CDR2	SEQ ID NO:	CDR3
36	KSSQSVFYTSNNKNYLA	43	WASTRES	50	QQVYDSYT
37	RASQGISSYLA	44	AASTLQS	51	QQLNSYPLT
38	RASQSVSSSYLA	45	GASSRAT	52	QQYGSSPRT
39	KSSQSVFYTSNNKNYLA	46	WASTRES	53	QQVYDSYT
40	RASQSVSSSYLA	47	GASSRAT	54	QQYDNVPDT
41	RASQSVSSSYLA	48	GASSRAT	55	QQYGTSL
42	RASQSVSSSYLA	49	GASSRAT	56	QQYGSSPRT

FIG. 4A

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Framework Regions, Heavy Chain

SEQ ID	FR1	SEQ ID	FR2
NO:		NO:	
57	GGGVVQPGRSCLKSAAAGFTFS	64	WVRQAPGKGLEWVA
58	.....AW..LR...V.....	64	.....
59	.....R.....	64	.....
60	GAEVRKPGTSVRISCRASGNTFT	65	WVRQAPGQGLQWVG
61	GGGLVQPGGSLRLSCATSGFIFN	66	WVRQAPGKGLEWVS
62	GPGLVRPSQTLSTCPVSPGSIK	67	WVRQPVGKGLEWIG
63	GAEVKKPGSSVKVSCRASGGTFS	68	WVRQAPGQGLEWVG
SEQ ID	FR3	SEQ ID	FR4
NO:		NO:	
69	RFTISKDNSKNTLYLQMNSLRIDDDTAVYYCAI	76	WGQGTLLTVVSS
70	.....R.....LS...PE.....TN	76	.....
71	.....VE.....	76	.....
72	RVSLTRDRSSNTVFLELSGLTEEDTALYFCAR	77	WGQGTVVTVVSS
73	RFTISRDNKNTAFLRMNSQRAEDTAVYYCAK	78	WGQGTTVTVVSS
74	RVSMVSVDMSRSQFFLELRDVTAAADTAVYYCAR	79	WGQGVVNVVFS
75	RVTITADDSTNTAYMGLSSLRSGDTAVYYCAR	80	WGKGTTTVTVVSS

FIG. 4B

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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Framework Regions, Light Chain

SEQ ID NO:	FR1	SEQ ID NO:	FR2
81	PDSLAVSLGERATINC	88	WYQQKPGQPPKLLIY
82	PSFLSASVGDRTVTTC	89	WYQLKPGKAPKLLIY
83	PGTSLSPGERATLSC	90	WYQQKPGQAPRLIY
84	PDSLAVSLGERATINC	91	WYQQKPGQPPKLLIY
85	PGTSLSPGEGATLSC	92	WYQQRPQGAPRLIY
86	PGTSLSPGEGATLSC	93	WYQQKPGQAPRLIY
87	PGTSLSPGERVTLSC	94	WYQQKPGQAPRLIY
SEQ ID NO:	FR3	SEQ ID NO:	FR4
95	GVPDRFSGSGGTDFTLTISSLQAEDVAVYYC	102	FGQGTKLEIKRTVA
96	GVPSRFSGSGGTDFTLTISSLQPEDFATYYC	103	FGGGAKEGIRRTVA
97	GIPDRFSGSGGTDFTLTISRLEPEDFAVYYC	104	FGQGTKVEIKRTVA
98	GVPDRFSGSGGTDFTLTISSLQAEDVAVYYC	105	FGQGTKLEIKRTVA
99	GIPDRFSGSGGTDFSTISSLQPEDIGTYC	106	FGQGTIRLEIKRTVA
100	GIPDRFSGSGGTDFLTISRLEPEDFAVYYC	107	FGQGTIRLEIKRTVA
101	GIPDRFSGSGGTDFLTISRLEPEDFAVYYC	108	FGQGTKVEIKRTVA

FIG. 4B Cont'd

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LIGHT CHAIN NUCLEOTIDE SEQUENCE OF ANTI-GPI ANTIBODIES

A4 - SEQ ID NO:112

CCAGACTCCCTGGCTGTCTCTGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTACACTTCCAAACAATAA
GAACTACTTAGCTTGGTACCAAGCAGAAACAGGCCAGCTCTTAAGTTGCTCATTTACTGGGCAATCCACCGGAATCCGGGGTCC
CTGACCGAATTCAGTGGCAGCGGTCTGGGACAGATTTCACCTCACCATCAGCAGCTGCAGGCTGAAGATGTGGCAGTTTATTAC
TGTCAGCAATATTATGATTCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAACGAACTGTGGCT

D2 - SEQ ID NO:113

CCATCCTTCCTGTCTGCACTCTGTAGGAGACAGAGTCACCATCACTTGCCGGGCCAGTCAAGGCATTAGCAGTTATTAGCCTGGTAT
CAGCTAAACCGGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCACTTTGCAAAAGTGGGTCCCATCAAGTTTCAGCGGCAG
TGGATCTGGGACAGAAATTCACCTCTCAATAAGCAGCTGCAGCTGAAGATTTGCAACTTATTACTGTCAACAGCTTAATAGTT
ACCTCTCACTTTCGGCGAGGGGCCAAGGTGGGATCAGACGAACTGTGGCT

D121 - SEQ ID NO:114

CCAGGCACCCTGTCTTTGTCTCCAGGGGAAAGAGCCACCCCTCTCTGCAAGGCCAGTCAAGTGTTAGCAGCAGCTACITTAGCCTG
GTACCAGCAGAAACCTGGCCAGGCTCCAGGCTCCTCATCTATGTTGCATCCAGCAGGGCCACTGGCATCCCAGACAGGTTCAGTG
GCAGTGGTCTGGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTGACGAGTATGGT
AGCTCACCTCGGACGTTCCGCCAAGGGACCAAGGTGGAATCAACGAACTGTGGCT

B2 - SEQ ID NO:115

CCAGACTCCCTGGCTGTCTCTGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTACACTTCCAAACAATAA
GAACTACTTAGCTTGGTACCAAGCAGAAACAGGCCAGCTCTTAAGTTGCTCATTTACTGGGCAATCCACCGGAATCCGGGGTCC
CTGACCGAATTCAGTGGCAGCGGTCTGGGACAGATTTCACCTCACCATCAGCAGCTGCAGGCTGAAGATGTGGCAGTTTATTAC
TGTCAGCAATATTATGATTCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGAACTGTGGCT

FIG. 5A

D14 - SEQ ID NO:116

CCAGGCACCCCTGTCATTGCTCCAGGGGAAGGAGCCACCCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCAGCAGCTACCTAGCCTG
GTATCAGCAGAGACCTGGCCAGGCTCCAGGCTCCTCATCTATGTGTCATCCAGAGGCCACCCGGCATCCCGACAGATTTCAGTG
GAAGTGGATCTGGGACAGATTTCAGTTTCACCATCAGCAGCTGCAGCCTGAAGATACTGGGACATATTACTGTCAACAATATGAT
AATGTCCCTGACACTTTTGGCCAGGGGACCAAGGCTGGAGATCAACGAACTGTGGCT

D5 - SEQ ID NO:117

CCAGGCACCCCTGTCITTGTCTCCAGGGGAAGGAGCCACCCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCAGCAGCTACTTAGCCTG
GTACCAAGCAGAAACCTGGCCAGGCTCCAGGCTCCTCATCTATGTGTCATCCAGTAGGGCCACTGGCATCCCGACAGGTTTCAGTG
GCAGTGGTCTGGGACAGACTTCACCTCTCACCATCAGCAGACTGGAGCCTGAAGATTTCAGTGTTACTGTTCAGCAGTATGGT
ACCTCACCCCTCTTCGGCCAGGGACACGACTGGAGATTAAACGAACTGTGGCT

A7 - SEQ ID NO:118

CCAGGCACCCCTGTCITTGTCTCCAGGGGAAGAGAGTCACCTCTCTCTGCAGGGCCAGTCAGAGTGTTAGCAGCAGTTACTTAGCCTG
GTACCAAGCAGAAACCTGGCCAGGCTCCAGGCTCCTCATCTATGTGTCATCCAGAGGCCACTGGCATCCCGACAGGTTTCAGTG
GCAGTGGTCTGGGACAGACTTCACCTCTCACCATCAGCAGACTGGAGCCTGAAGACTTTCAGTTTATTACTGTTCAGCAGTATGGA
AGCTCACCTCGGACGTTTCGGCCAGGGACCAAGGTGGAAATCAACGAACTGTGGCT

FIG. 5A Cont'd

HEAVY CHAIN NUCLEOTIDE SEQUENCE OF ANTI-GPI ANTIBODIES

A4-H - SEQ ID NO:116

GAGGCGTGGTCCAGCCTGGGAGGTCCCTGAACCTCTCCTGTGCAGCCTCTGGATTACATTCACTAGTCATGGCTCGCACTGGGTC
CGCCAAAGCTCCAGGCAAGGGCTGGAGTGGTGGCACTTTGTCTGTGATGGAAAGTAATAAATTCTATATAGAATCCGTGAAGG
GCCGATTCAACCATCTCCAAAGGACAATTCTAAGAACACACTGTATCTGCAATGAACAGCCTGAGAATTGACGACACGGCTGTCTAT
TACTGTGCGATTTCCTCTGGTGGAACTACCGCTTTTAACTACTGGGCCAGGGAACCCCTGGTCACCGTCTCCTCA

D2-H - SEQ ID NO:117

GGCGTGGTCCAAAGCATGGAGGTCCCTAAGACTCTCCTGTGTAGCCTGTGGATTCACTTCAGTAGTCATACCATGCACTGGGTCCG
CCAGGCTCCAGGCAAGGGCTGGAGTGGTGGCACTTATATCTATGATGGAAGTAATAAATACTATGCAGACTCCGTGAAGGC
CGATTCAACCATCTCCAGAGACAATTCCAAGAACACGCTGTATCTGCAATTGAGCAGCCTAAGACCTGAGGACACGGCTGTCTATTA
TTGTACGAATTCGAGGTGGGAGCTACCGCTTTTGACTACTGGGCCAGGGAACCCCTGGTCACCGTCTCCTCAG

D121-H - SEQ ID NO:118

GGGAGGCGTGGTCCAGCCTGGGAGGTCCCTGAGACTTTTCTGTGCGCCTCTGGATTCACTTCAGTTCCTATACTTTCCACTGG
GTCCGCCAGGCTCCAGGCAAGGGCTGGAGTGGTGGCAGTTATATCATATGATGGAACAAGAAATACTACGCAGACTCCGTGA
AGGGCCGATTCAACCATCTCCAGAGACAATTCCAAGAACACTCTATATCTGCAATGAACAGCCTGAGAGTTGAGGACACGGCTGT
TATTACTGTGCGATTTCATAGTGGGAACCTACCGCTTTTAACTACTGGGCCAGGGAACCCCTGGTCACCGTCTCCTC

FIG. 5B

B2-H - SEQ ID NO:119

GGGGCIGAGGGTGAGGAAGCCCGGACCTCCGTGAGGATCTCTTGAGGGCATCTGGAAACACCTTCACTGGCCACCATAATTCACCTG
GGTCCGCCAGGCCCTGGACAAGCCCTTCAGTGGATGGGAAGATCAACCCGACTGGCGGCGGCTTAGTCTCGCACAGAGTTTC
CAGGACAGAGTCAGCCTGACCAAGGACAGGTCGTCCAAATACAGTCTTCTTGAACTGAGCGGCTCACGGAGGAGACACGGCCT
TATATTCTGTGCGAGGCCCGGATTTAACAATGATCCGGGAACCTCTTGACCTCTGGGGCCAGGGGACACAGTGGTCAACCGTCTCTCTCA

D14-H - SEQ ID NO:120

GGGGGAGGCTTGGTACAGCCTGGGGGTCCCTGAGACTCTCTCTGCAACCTCTGGATTTCATCTTTAACAGCTATGCCATGAACCTG
GGTCCGCCAGGCTCCAGGGAAGGGCTTGGTGGTCTCACGTATTAGTGGAAATAGTGGAGCACATTCTACGCAGACTCCGTG
AAGGGCCGGTTCACCATCTCCAGAGACAAATTCCAAGAACACCGGCTTCTGCGAATGAACAGCCAGAGCCGGAAGACACGGCCG
TTTATTACTGTGCGAAAGATCTGTCTGAGTGGTGCACTACTACTACGGGATGGACGTCTGGGGCCAAAGGGACCCACGGTCAACCGTC
TCCTCA

D5-H - SEQ ID NO:121

GGCCCCAGGATTGGTGAGGCCATCACAGACCCTATCCCTCACTGCTCTCCAGGCTCCATTAAAGGTGATAGTTACTTCTGG
AGCTGGGTCCGTAGCCCGTAGGGAAAGGACTGGAGTGGATAGGGCGTATCTACGGCAGAGGGACTACCAATTACACCGTGTTT
TCGGGAGTCGAGTCAGTATGTCAGTGGACATGTCCAGGAGTCAGTTTCTTGGAATTGAGAGATGTGACCCGCCAGACACGGCC
GTCTATTACTGTGCGAGAGACAAGGGGTCCGAATACTCCTACTTTGACCCCTGGGGCCAGGGAATAGTGGTCAACGTCCTCTCA

FIG. 5B Cont'd

A7-H - SEQ ID NO:122

GGGCTGAGGTGAAGAAGCCTGGGTCCTCGGTGAAGTCTCCTGCAGGGCTTCTGGAGGCACATTCAGCAGATATGCTA
TCAGCTGGGTGCGACAGGCCCTGGACAAGGGCTTGAGTGGATGGGAGGGATCATCCCTCCCTTTGGTCCAGTAAACT
ACGCACAGAA GTTCCAGGGCAGATCAGATTACCGCGGACGATTCCACGAACACAGCCTACATGGGTCTGAGCAGCC
TGAGATCTGGGGACACGGCCGTGTATTACTGCGGAGAGTGGCCTATGATGGTAGTGGCTATTACAAACAATATCCCAA
AGATCTACTACTCTACATGGACGTCTGGGGCAAAGGGACCAACCGTCACCGTGTCTCAGC

FIG. 5B Cont'd

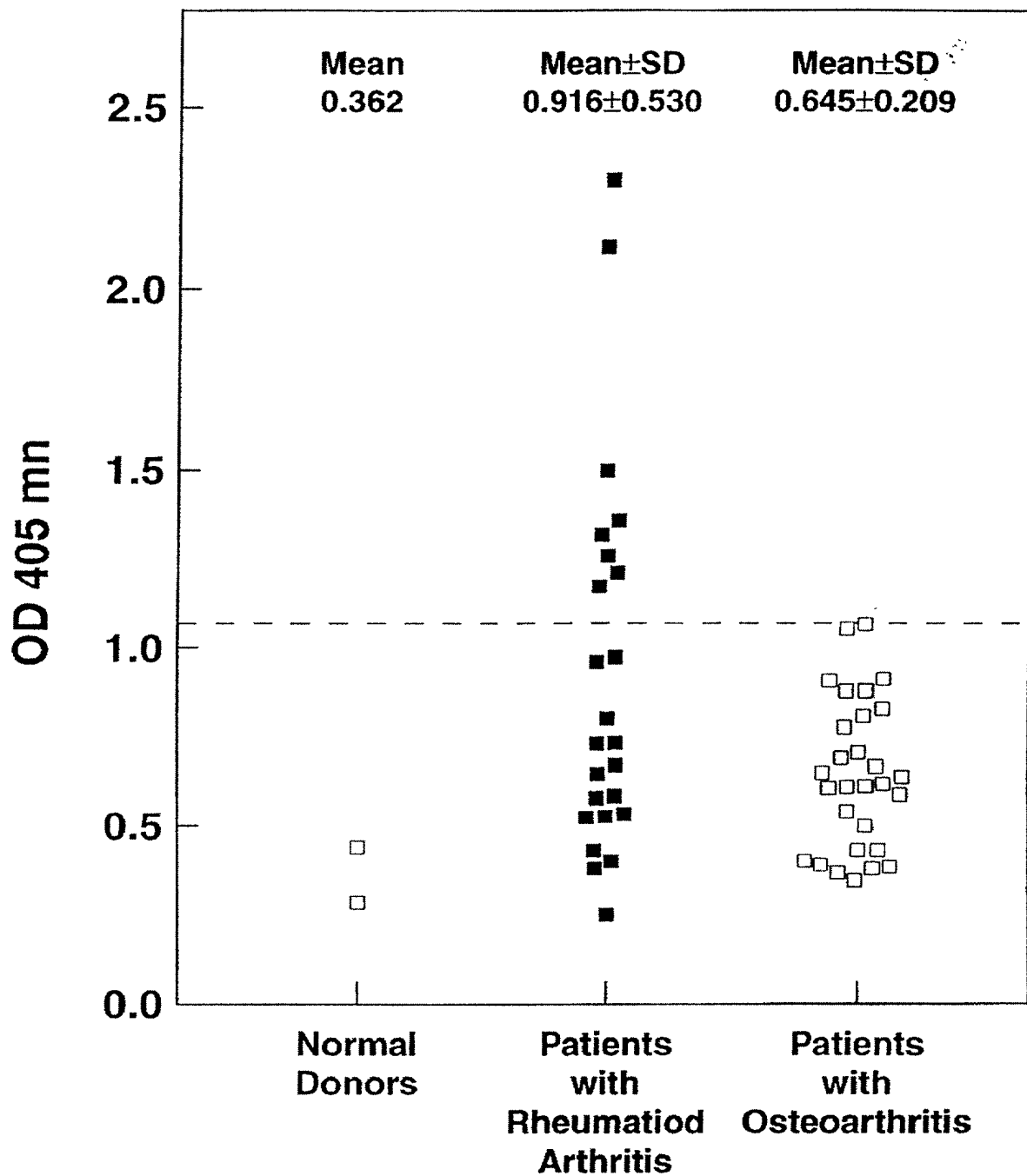


FIG. 6

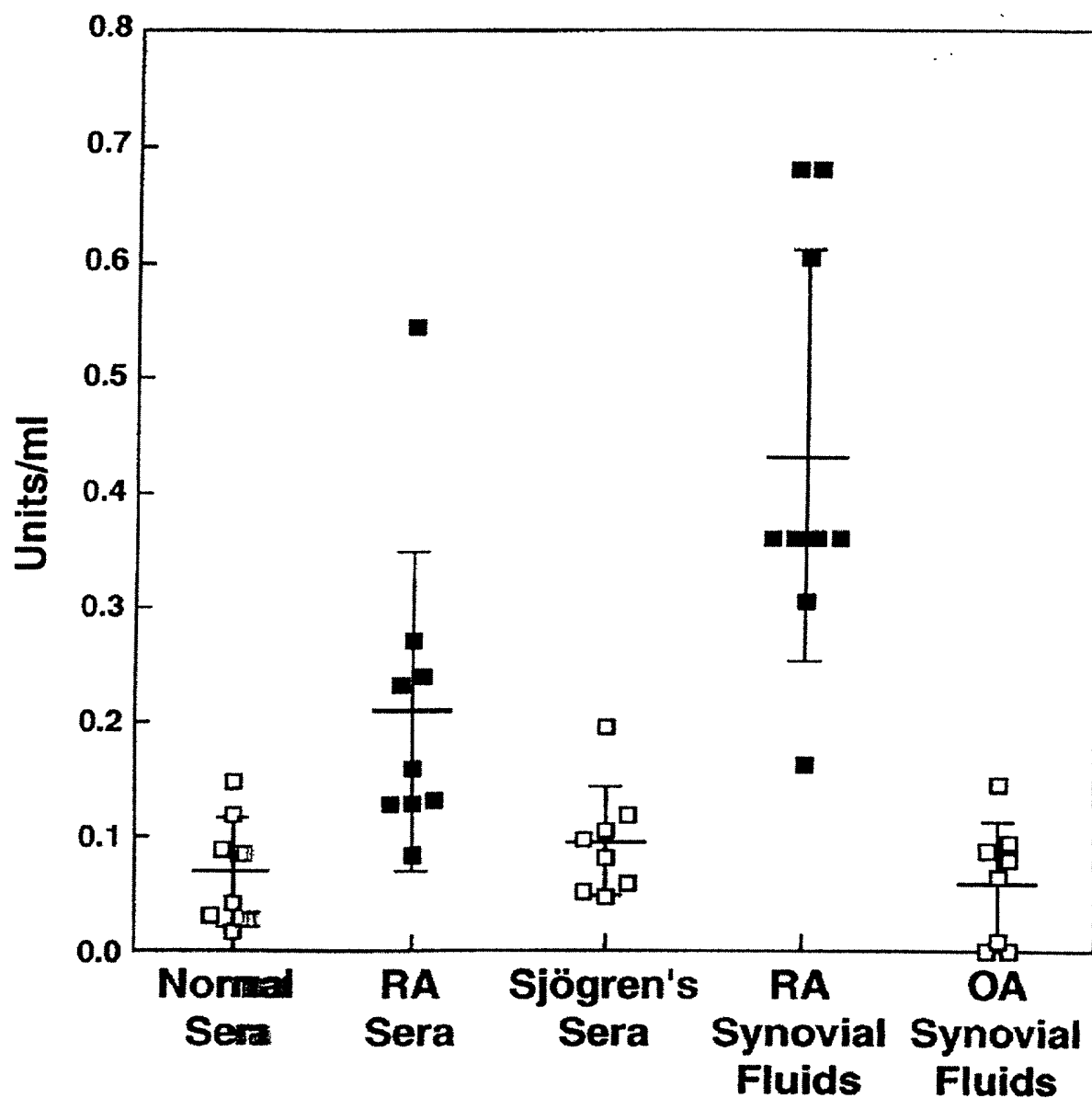


FIG. 7

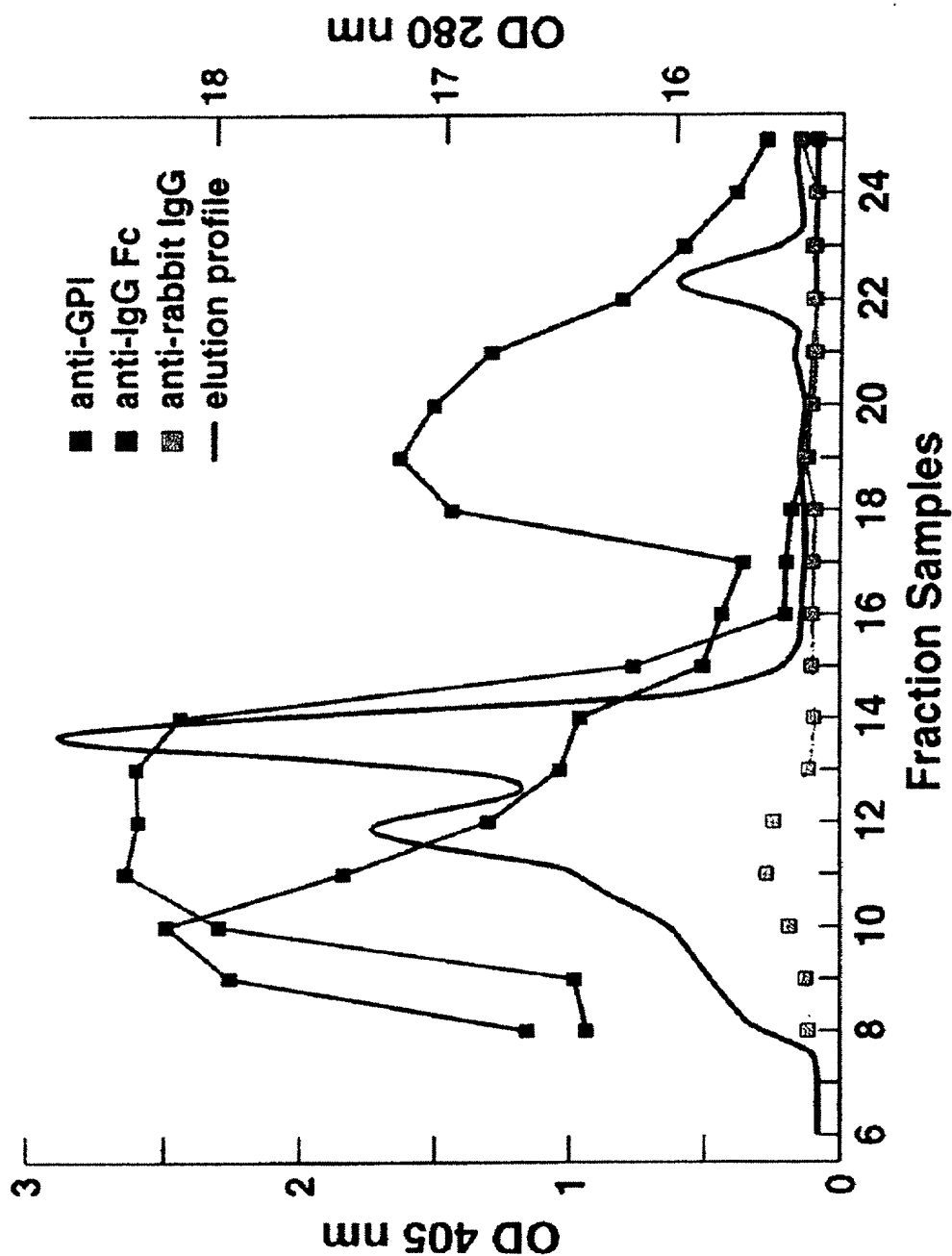


FIG. 8A

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE

INVENTORS NAME: Henrik Ditzel et al.

SERIAL NO.: 09/828,708

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FIG. 8B



FIG. 8C

09828708-021102

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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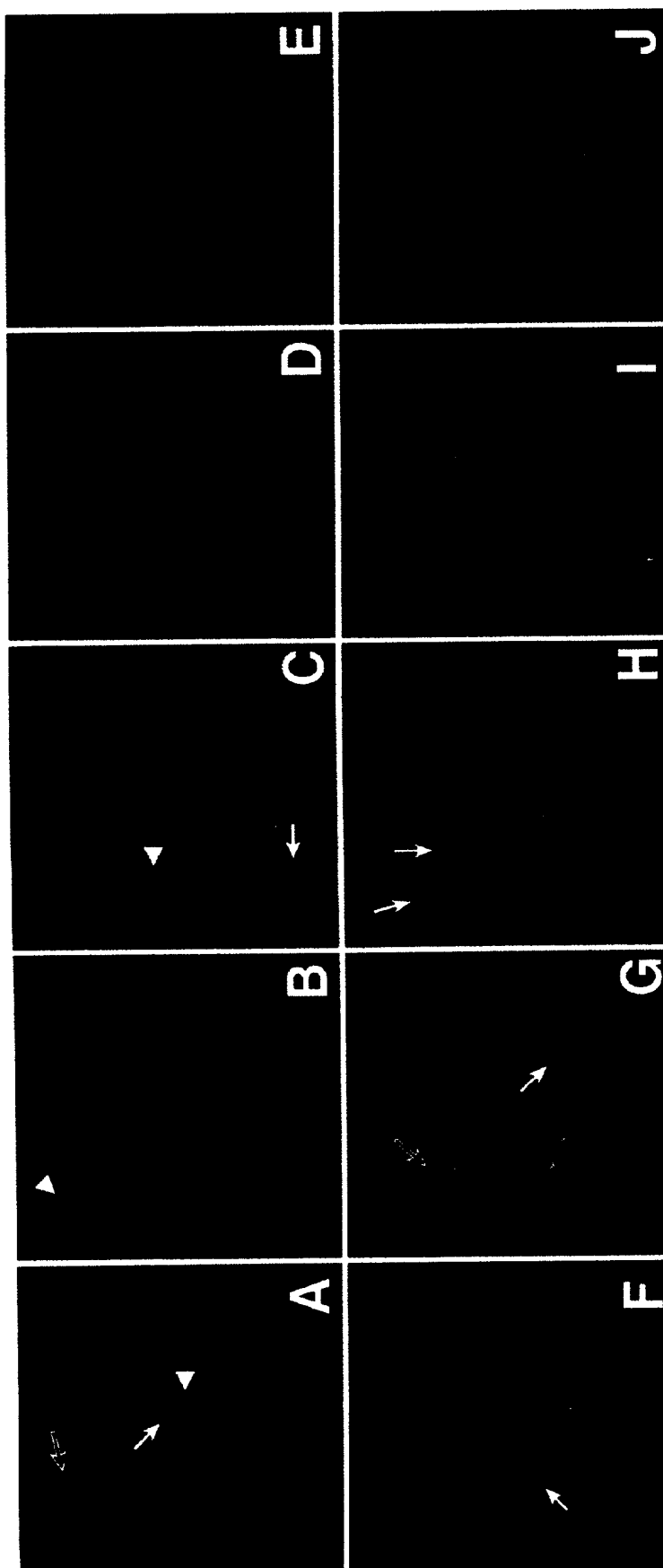


FIG. 9